

KENWOOD

AUDIO VIDEO SURROUND RECEIVER

KRF-V4550D

INSTRUCTION MANUAL

KENWOOD CORPORATION

Preparation

Operations

Additional Information

Before applying the power



Caution : Read this page carefully to ensure safe operation.

Units are designed for operation as follows.

U.S.A. and Canada	AC 120 V only
Australia	AC 240 V only
Europe and U.K.	AC 230 V only
China and Russia	AC 220 V only
Other countries	AC 110 - 120 / 220 - 240 V switchable*

Unpacking

Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost.

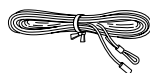
Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.

We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

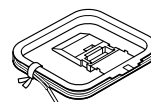
Keep this manual handy for future reference.

Accessories

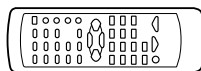
FM indoor antenna (1)



AM loop antenna (1)



Remote control unit (1)



Batteries (R6/AA) (2)



Microcomputer malfunction

If operation is not possible or an erroneous display appears, even though all connections have been made properly, reset the microcomputer referring to "In case of difficulty".

→ 31

Safety precautions

WARNING :

TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

Maintenance of the unit




When the front panel or case becomes dirty, wipe with a soft, dry cloth. Do not use thinner, benzine, alcohol, etc. for these agents may cause discoloration.

In regard to contact cleaner

Do not use contact cleaners because it could cause a malfunction. Be specially careful not to use contact cleaners containing oil, for they may deform the plastic component.

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Caution : Read the pages marked  carefully to ensure safe operation.

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How to use this manual

This manual is divided into three sections, Preparations, Operations, and Additional Information.

Preparations

Shows you how to connect your audio and video components to the receiver and prepare the surround processor.

We will guide you to make setting up your system as easy as possible. However, since this receiver works with all of your audio and video components, connecting the system can be fairly complex.

Operations

Shows you how to operate the various functions available from the receiver.

Additional Information

Shows you additional information such as "In case of difficulty" (trouble-shooting) and "Specifications".


Special features

True home theater sound

This receiver incorporates a wide variety of surround modes to bring you maximum enjoyment from your video software. Select a surround mode according to your equipment or the software you are going to play and enjoy!

→ 25

Dolby Pro Logic & Dolby 3 Stereo

This surround system reproduces theater-like surround sound from video software marked  **DOLBY SURROUND**.

The PRO LOGIC mode uses the built-in adaptive matrix circuit to steer the Left, Center, Right and Surround channel audio signals.

The 3 STEREO mode will redirect the Surround signal to the front left and right speakers when only the front and center speakers are used.

Dolby Digital

The DOLBY DIGITAL mode lets you enjoy full digital surround from software processed in the Dolby Digital format. Dolby Digital provides up to 5.1 channels of independent digital audio for better sound quality and more powerful presence than conventional Dolby Surround.

DVD 6-channel input

If you own a DVD player equipped with 6-channel output, this receiver allows you to obtain the full surround sound impact of DVD source material featuring multi-channel encoding. Since the source signals are digital and each channel is input independently, the resulting ambience is far superior to what can be achieved with conventional surround sound systems.

RDS (Radio Data System) tuner

The receiver is equipped with an RDS tuner that provides several convenient tuning functions: RDS Auto Memory, to automatically preset up to 40 RDS stations broadcasting different programs; station name display, to show you the name of the current broadcast station; and PTY search to let you tune stations by program type.

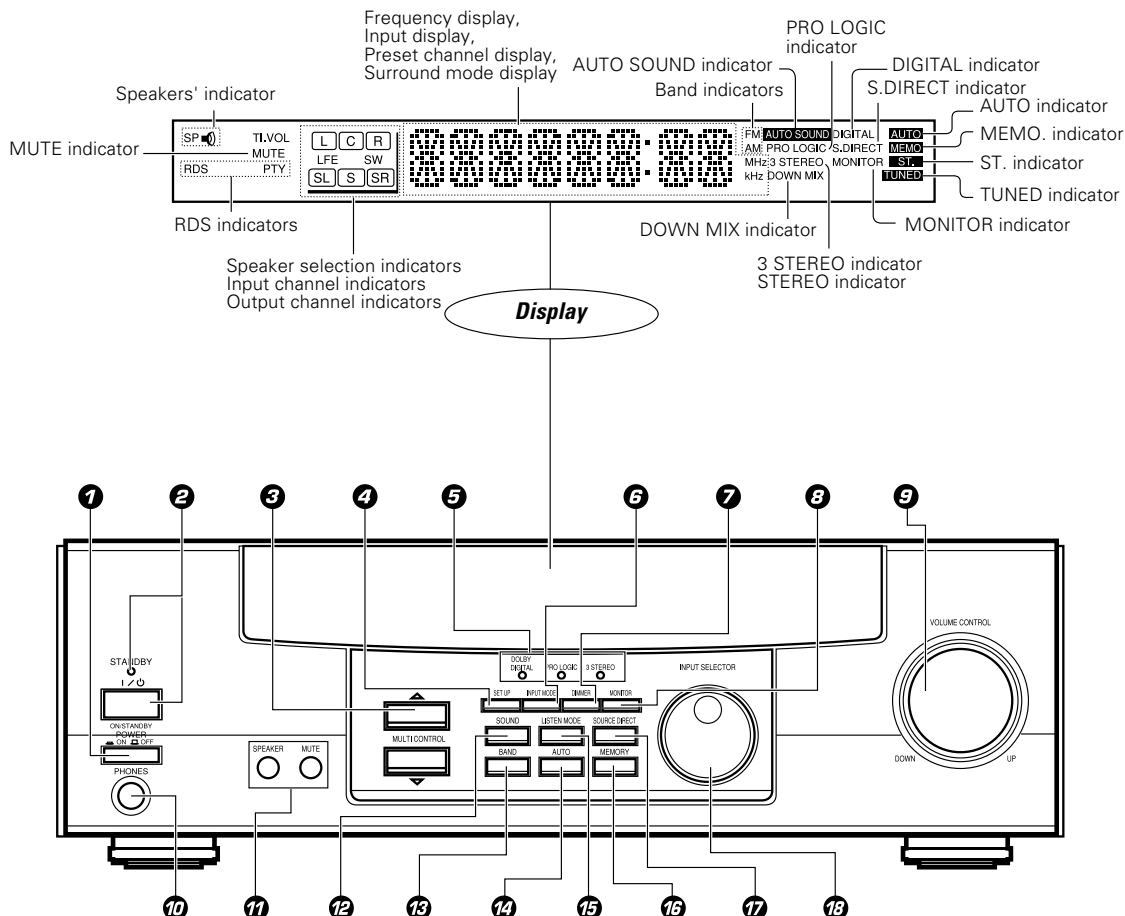
PTY (Program Type) search

Tune the stations by specifying the type of program you want to hear.

Memory back up function

Please note that the following items will be deleted from the unit's memory if the power cord is disconnected from the AC outlet for approximately 3 days.

- Power mode.
- Input selector settings.
- Device preset.
- Picture output.
- Speaker ON/OFF
- Volume level.
- BASS, TREBLE, INPUT level.
- Subwoofer ON/OFF.
- Dimmer level.
- Monitor ON/OFF.
- MD/TAPE settings.
- 6ch/2ch input setting.
- Listen mode setting.
- Speaker settings.
- Input mode setting.
- Midnight mode setting.
- Broadcast band.
- Frequency setting.
- Preset stations.
- Tuning mode.

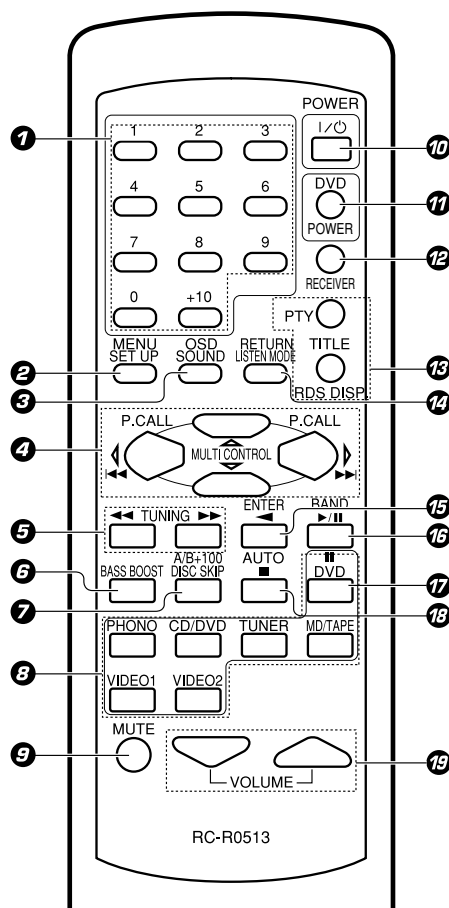


- | | | |
|---|--|--|
| 1 POWER key - [16]
Use to switch the main power ON/OFF. | 7 DIMMER key - [20] - [28]
Use to adjust the brightness of the display. | 16 MEMORY key - [22]
Use to store radio stations in the preset memory. |
| 2 ON/STANDBY (I/O) key - [16]
Use to switch the power ON/STANDBY when the POWER is turned ON. | 8 MONITOR key - [19]
Use to monitor the source that is connected to the VIDEO2/MONITOR jack. | 17 SOURCE DIRECT key - [19]
Use to pass the source material direct to the amplifier. |
| STANDBY indicator | 9 VOLUME CONTROL knob - [18]
Use to control a variety of settings. | 18 INPUT SELECTOR knob - [18]
Use to select the input sources. |
| 3 MULTI CONTROL key - [16]
Use to control a variety of settings. | 10 PHONES jack - [19]
Use for headphone listening. | |
| 4 SET UP key - [16]
Use to select speakers' settings etc. | 11 SPEAKER key - [17]
Use to turn the speaker ON/OFF. | |
| 5 Surround indicators | MUTE key - [19]
Use to temporarily mute the sound. | |
| DOLBY DIGITAL indicator - [26]
Lights when the receiver is in the Dolby Digital mode. | 12 SOUND key - [27]
Use to adjust the sound quality and ambience effects. | |
| PRO LOGIC indicator - [26]
Lights when the receiver is in the PRO LOGIC mode. | 13 BAND key - [21]
Use to select the broadcast band. | |
| 3 STEREO indicator - [26]
Lights when the receiver is in the 3 STEREO mode. | 14 AUTO key - [21]
Use to select the auto tuning mode. | |
| 6 INPUT MODE key - [7]
Use to switch between the digital and analog inputs. | 15 LISTEN MODE key - [26]
Use to select the listening mode. | |

Standby mode

While standby indicator is lit, this receiver is in standby mode and consumes a small amount of current for back-up. This system can be switched ON by using the remote control.

Remote control unit

**1 Numeric keys**

- [23]

If CD or MD is selected as the input source, these keys function as numeric keys. If tuner is selected as the input source, these keys are used to call up station presets.

2 SET UP key

- [16]

Use to select speakers' settings etc.

MENU key

Use to operate other components.

3 SOUND key

- [27]

Use to adjust the sound quality and ambience effects.

OSD key

Use to operate other components.

4 MULTI CONTROL keys

- [16]

Used to control a variety of settings.

P.CALL <◀/▶> keys

- [23]

If tuner is selected as the input source, these keys function as P.CALL keys.

<◀/▶> keys

If CD or MD is selected as the input source, these keys function as skip keys.

5 TUNING <◀/▶> keys

If tuner is selected as the input source, these keys function as tuning keys.

If CD, MD or TAPE is selected as the input source, these keys function as search keys.

6 BASS BOOST key

- [18]

Use to select the maximum adjustment setting for the low frequency range.

7 DISC SKIP key

If CD is selected as the input source, this key functions as the multi-CD player disc skip key.

A/B key

If TAPE is selected as the input source, this (A and B) of a double cassette deck.

+100 key

Use to select the disc number with the multi-CD player.

8 INPUT SELECTOR keys (DVD, PHONO, CD/DVD, TUNER, MD/TAPE, VIDEO1, VIDEO2)

- [18]

Selects the inputs and sets the remote control to operate the component registered at the respective input.

9 MUTE key

- [19]

Use to temporarily mute the sound.

10 POWER (I/O) key

- [16]

Use to turn the receiver on and off.

11 DVD POWER key

- [29]

Used to operate DVD player.

12 RECEIVER key

Use to return to the operation of the receiver.

13 TITLE key

Use to operate other components.

RDS operation keys

- [22] - [24]

Use to receive RDS broadcasts.

14 LISTEN MODE key

- [26]

Use to select the listening mode.

RETURN key

Use to operate other components.

15 ENTER key

Use to operate other components.

◀ key

If tape is selected as the input source, this key functions as the play key for side B of the cassette (the side facing away from the front of the deck).

16 BAND key

- [21]

Use to select the broadcast band.

▶/|| key

If CD is selected as the input source, this key functions as the play/pause key.

If MD or TAPE is selected as the input source, this key functions as the play key.

17 || key

Use to operate other components.

18 AUTO key

- [21]

Use to select the auto tuning mode.

■ key

If CD, MD or TAPE is selected as the input source, this key functions as the stop key.

19 VOLUME keys

- [18]

Use to adjust the receiver volume.

Setting up the system

Make connections as shown in the following pages. When connecting the related system components, be sure to also refer to the instruction manuals supplied with the components you are connecting. Do not connect the power cord to a wall outlet until all connections are completed.

VIDEO 2/MONITOR jacks

The receiver's **VIDEO 2/MONITOR** jacks can be used in two different ways. Make the appropriate setting for the component connected to the jack when the receiver is turned on.

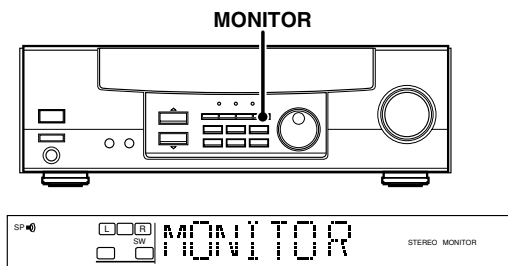
Use as a VIDEO 2 jack

You can connect a video deck or the like to these jacks and perform video playback and recording. The initial factory setting is "VIDEO 2".

Use as a MONITOR jack

You can connect a cassette deck or the like to these jacks and make use of the deck's monitoring function during recording. Alternately, you can connect a graphic equalizer to these jacks to apply compensation to the music signal.

To use the **VIDEO 2/MONITOR** jacks as **MONITOR** jacks, hold down the **MONITOR** key of the main unit for more than two seconds so that the indication shown below appears.



- To switch the setting back to "VIDEO 2", once again hold down the **MONITOR** key for two seconds or more.

Notes

1. Be sure to insert all connection cords securely. If their connections are imperfect, the sound may not be produced or noise may interfere.
2. Be sure to remove the power cord from the AC outlet before plugging or unplugging any connection cords. Plugging/unplugging connection cords without disconnecting the power cord can cause malfunctions and may damage the unit.
3. Do not connect power cords from components which power consumption is larger than what is indicated on the AC outlet at the rear of this unit.

Analog connections

Audio connections are made using RCA pin cords. These cables transfer stereo audio signal in an "analog" form. This means the audio signal corresponds to the actual audio of two channels. These cables usually have 2 plugs on each end, one red for the right channel and one white for the left channel. These cables are usually packaged with the source unit, or are available at your local electronics retailer.

Input mode settings

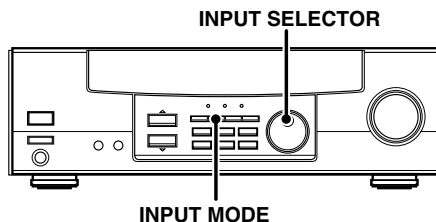
CD/DVD, DVD/6ch and VIDEO2 inputs each include jacks for digital audio input and analog audio input.

You must select beforehand which type of input is to be used for each connected component.

The initial factory settings is to use the digital audio signal for playback (CD/DVD, DVD/6ch and VIDEO2).

To use the analog audio input for playback instead (if, for example, you have connected a VCR to the VIDEO2 input), you must set the input mode for the corresponding input to the analog mode.

After completing connections and turning on the receiver, follow the steps below.



- 1 Use the **INPUT SELECTOR** knob to select **CD/DVD** or **VIDEO2**.
- 2 Press the **INPUT MODE** key.

Each press switches the setting as follows:

In DVD/6ch play mode

- 1 **D-AUTO** (digital input, auto sound)
- 2 **D-MANUAL** (digital input, manual sound)
- 3 **6ch INPT** (DVD/6ch input)
- 4 **ANALOG** (analog input, manual sound)

In other mode than DVD/6ch play mode

- 1 **D-AUTO** (digital input, auto sound)
- 2 **D-MANUAL** (digital input, manual sound)
- 3 **ANALOG** (analog input, manual sound)

Digital input:

Select this setting to play digital signals from a DVD, CD, or LD player.

Analog input:

Select this setting to play analog signals from a cassette deck, VCR, or record player.

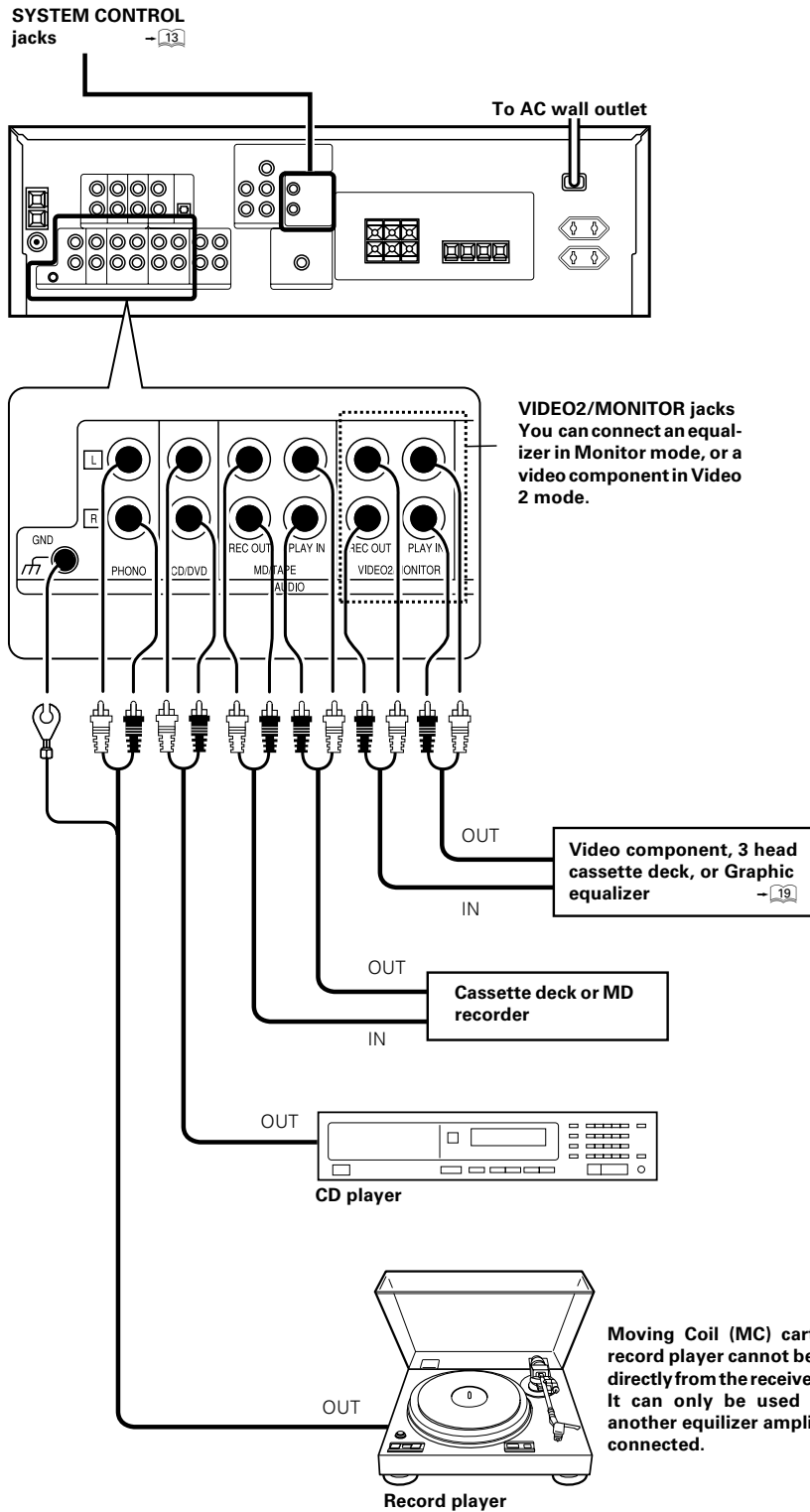
Auto sound:

In the auto sound mode (**AUTO SOUND** indicator lights), the receiver selects the listening mode automatically during playback to match the type of input signal (Dolby Digital, PCM) and the speaker setting. The initial factory setting is auto sound on.

To keep the receiver set to the currently selected listening mode, use the **INPUT MODE** key to select "**D-MANUAL**" (manual sound). However, even when this setting is selected, there may be cases in which the listening mode is selected automatically to match a Dolby Digital source signal depending on the combination of listening mode and source signal.

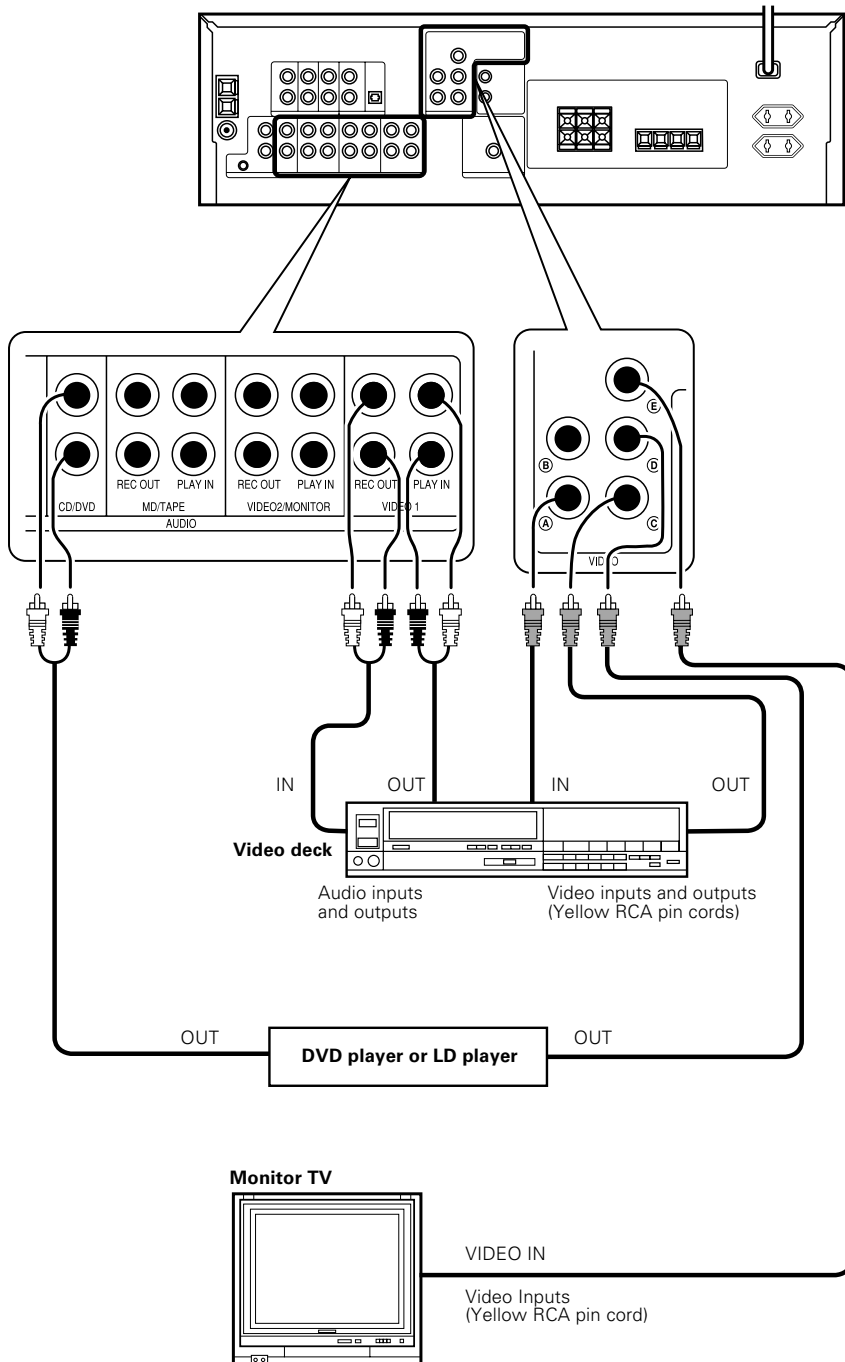
If the **INPUT MODE** key is pressed quickly, sound may not be produced.

Connecting audio components




When you connect the video component to the VIDEO2/MONITOR jacks, connect the video cord (yellow RCA pin cords) of the connected component to the VIDEO2 IN jack .

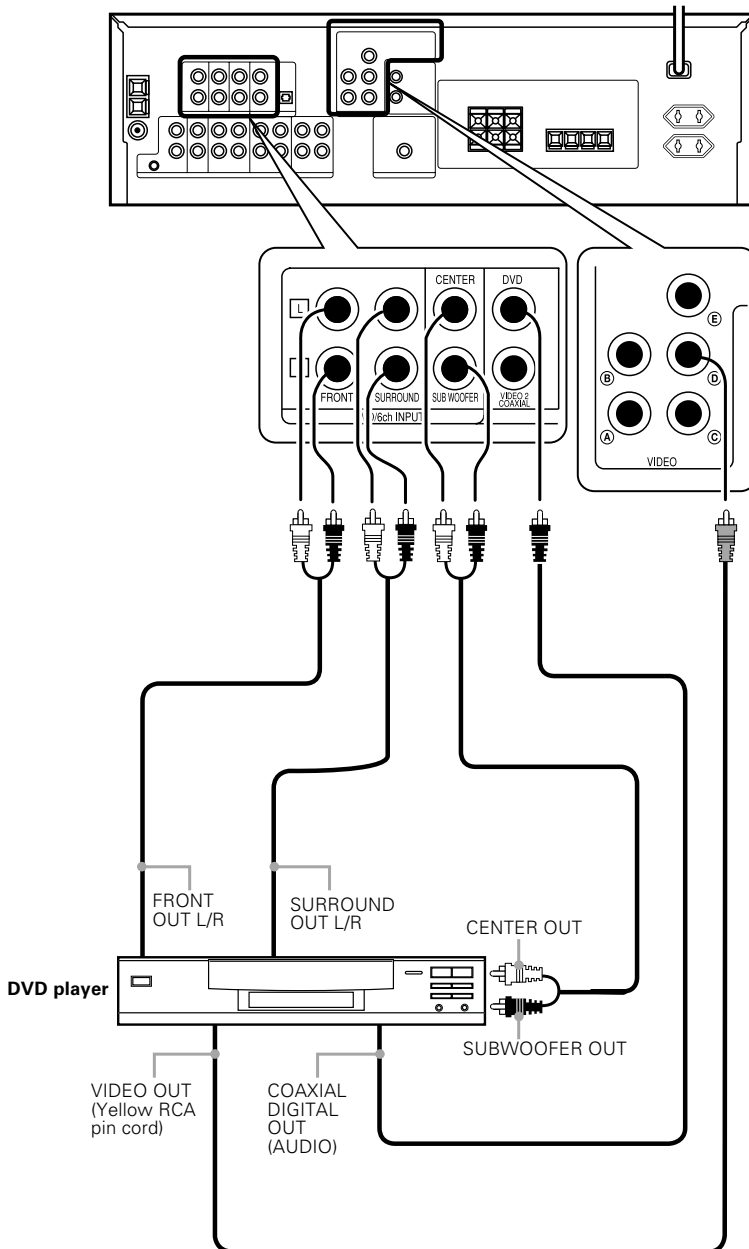
Connecting video components



A video component with digital audio outputs should be connected to the VIDEO2 jacks.

Connecting a DVD player (6-channel input)

If you have connected a DVD player to the receiver with digital connection, be sure to read the "Input mode settings" section carefully. 



To switch the speakers off, press the MUTE key.

CAUTION

Be sure to adhere followings or proper ventilation will be blocked causing damage or fire hazard.

- Do not place any objects impairing heat radiation onto the top of unit.
- Leave a space around the unit (from the largest outside dimension including projection) equal or greater than, shown below.

Top panel : 50 cm

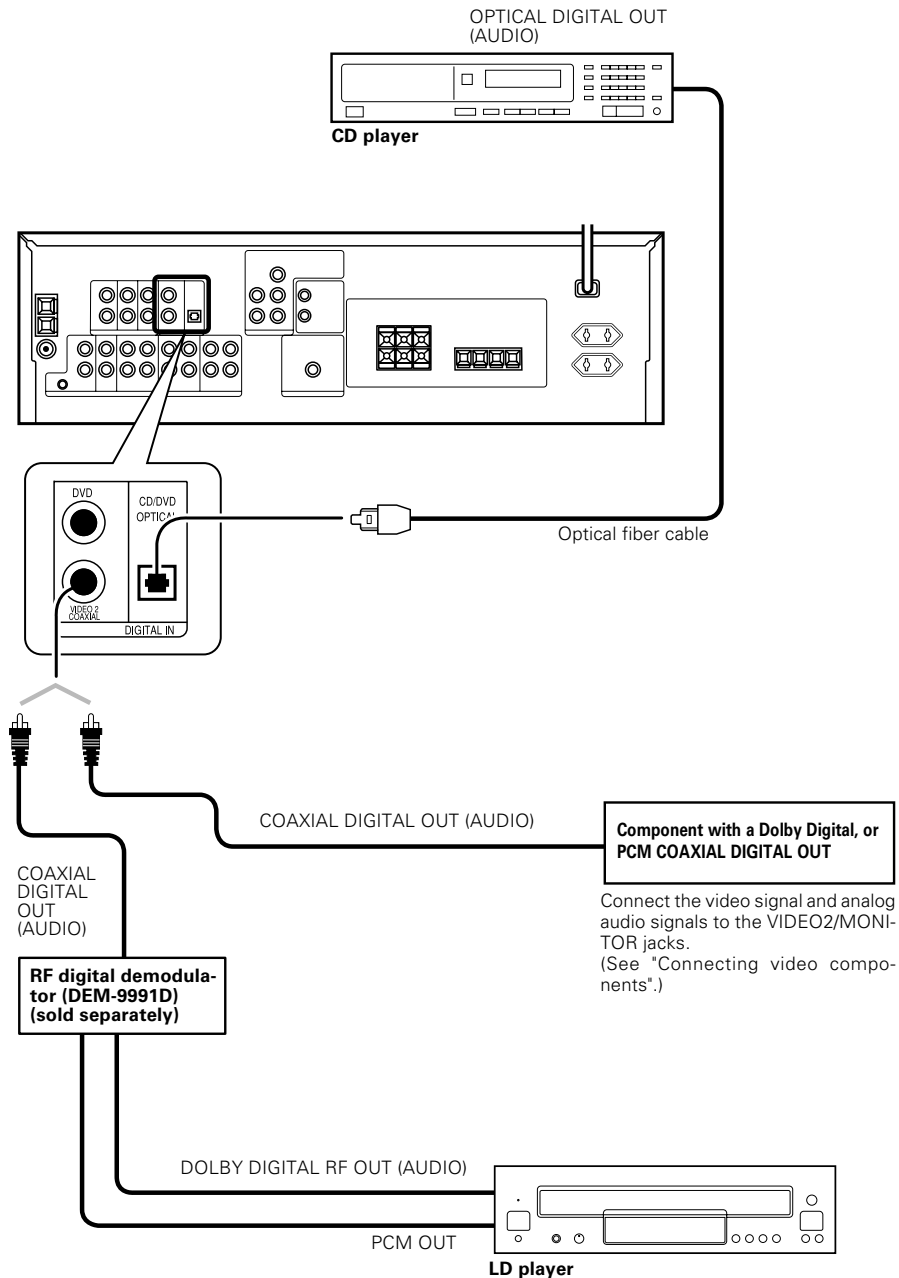
Side panel : 10 cm

Back panel : 10 cm

Digital connections

The digital in jacks can accept Dolby Digital, or PCM signals. Connect components capable of outputting Dolby Digital, or standard PCM (CD) format digital signals.

If you have connected any digital components to the receiver, be sure to read the "Input mode settings" section carefully. → 7



To connect an LD player with a DIGITAL RF OUT, connect the LD player to the KENWOOD RF digital demodulator (DEM-9991D). Next, connect the DIGITAL OUT jacks of the demodulator to the DIGITAL IN jacks of the receiver. Connect the video signal and analog audio signals to the VIDEO2/MONITOR jacks. (See "Connecting video components".)

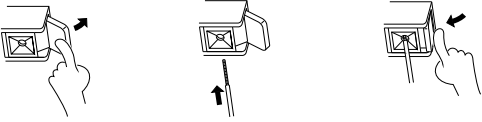
Connecting the antennas

AM loop antenna

The supplied loop antenna is used for indoors. Place it as far as possible from the receiver, TV set, speaker cords and power cord, and adjust the direction for best reception.

AM antenna terminal connections

- ① Push lever.
- ② Insert cord.
- ③ Return lever.



FM indoor antenna

The supplied indoor antenna is for temporary use only. For stable signal reception we recommend using an outdoor antenna. Disconnect the indoor antenna when you connect one outdoors.

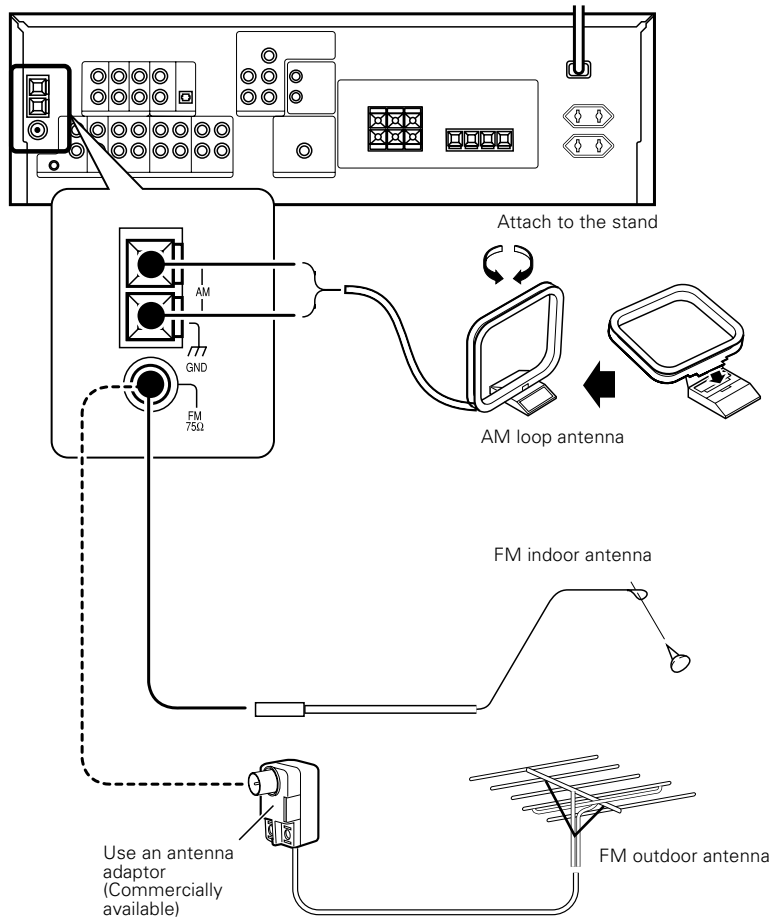
FM antenna terminal connections

Insert cord.



FM outdoor antenna

Lead the 75Ω coaxial cable connected to the FM outdoor antenna into the room and connect it to the **FM 75Ω** terminal.

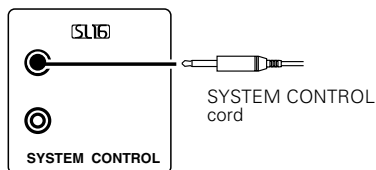


Connecting the system control

Connecting system control cords after connecting a KENWOOD audio component system lets you take advantage of convenient system control operations.

This unit is compatible only with the [SL-16] mode. The system control operation is not available if the unit is connected in the [XS8], [XS], or [XR] connection mode.

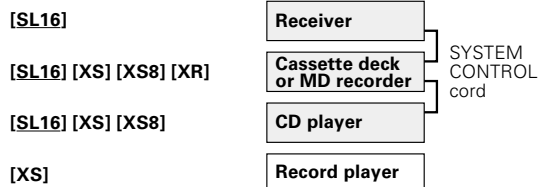
If your component has the mode select switch, set the connected components to the [SL16] mode.



- You may connect the system control cord to either the up or down jack.

EXAMPLE: [SL16] mode connections

The underlined portion represents the setting of the system control mode.



- In order to take advantage of the system control operations, the components must be connected to the correct jacks. To use a CD player it must be connected to the CD jacks. To use a cassette deck (or MD recorder) it must be connected to the MD/TAPE jacks. When using more than one CD player (etc.) only the one connected to the specified jacks may be connected for system control.
- Some CD players and cassette decks are not compatible with the [SL16] system control mode. Do not make system connections with equipment that is not [SL16] compatible.
- Some MD players are not system control compatible. You cannot make system control connections to this kind of equipment.

Notes

- [SL16] equipment cannot be combined with [XR], [XS], and [XS8] equipment for system operations. If your equipment consists of this kind of combination, please do not connect any system control cords. Even without system control cords, normal operations can be carried out without effecting performance.
- Do not connect system control cords to any components other than those specified by KENWOOD. It may cause a malfunction and damage your equipment.
- Be sure the system control plugs are inserted all the way in to the system control terminals.

Do not connect a system control cord to a cassette deck connected to the VIDEO2/MONITOR jacks.

SYSTEM CONTROL OPERATIONS

Remote Control

Lets you operate this unit with the system remote supplied with the receiver.

Automatic Operation

When you start playback from a source component, the input selector on this unit switches to that component automatically.

Synchronized Recording

Lets you synchronize recording with the start of playback when recording from CD, MD or analog discs.

Connecting the speakers

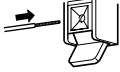
1 Strip coating.



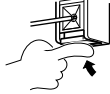
2 Push the lever.



3 Insert the cord.



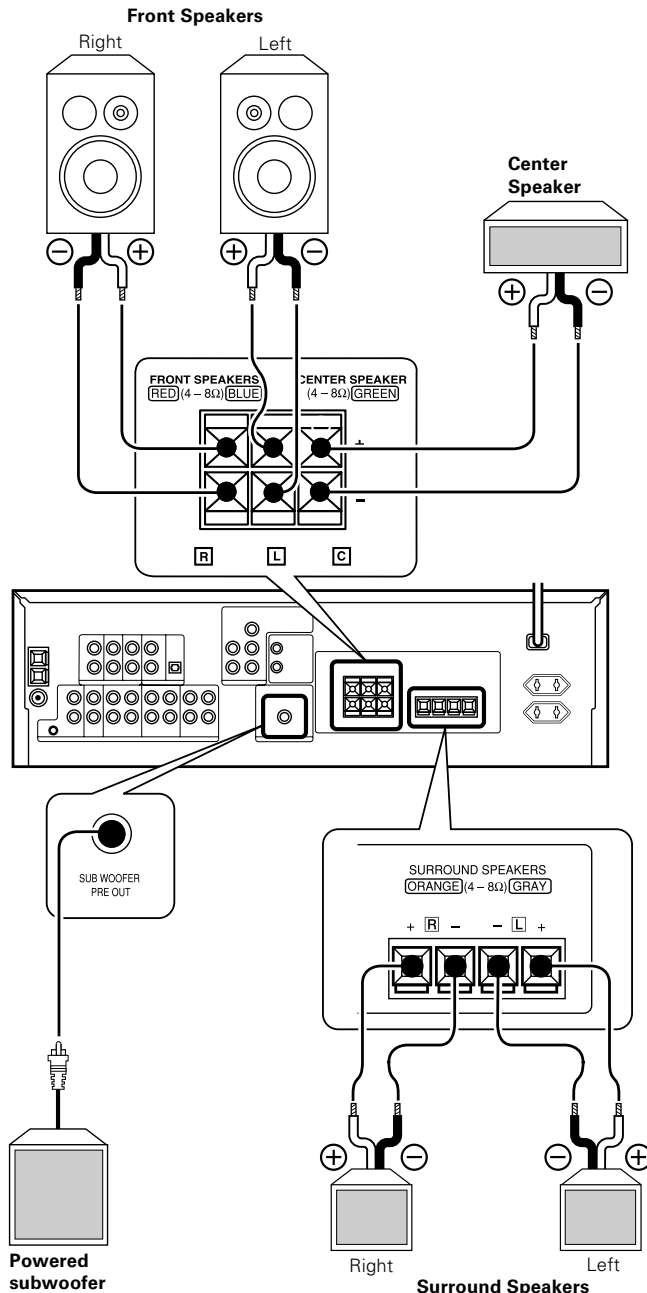
4 Return the lever.



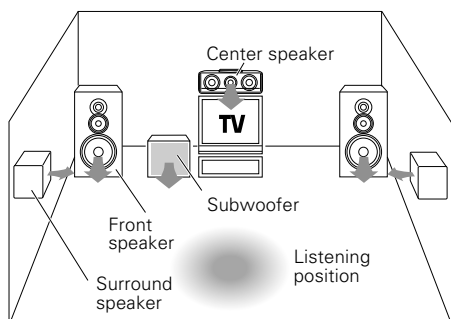
- Never short circuit the + and – speaker cords.
- If the left and right speakers are connected inversely or the speaker cords are connected with reversed polarity, the sound will be unnatural with ambiguous acoustic imaging. Be sure to connect the speakers correctly.

Speaker impedance

After confirming the speaker impedance indications printed on the rear panel of the receiver, connect speakers with matching impedance ratings. Using speakers with a rated impedance other than that indicated on the rear panel of the receiver could result in malfunctions or damage to the speakers or receiver.



Speaker placement



Front speakers : Place to the front left and right of the listening position. Front speakers are required for all surround modes.

Center speaker : Place front and center. This speaker stabilizes the sound image and helps recreate sound motion. Be sure to connect a center speaker when using the Dolby 3 Stereo mode.

Surround speakers : Place to the direct left and right, or slightly behind, the listening position at even heights, approximately 1 meter above the ears of the listeners. These speakers recreate sound motion and atmosphere. Required for surround playback.

Subwoofer : Reproduces powerful deep bass sounds.

- Although the ideal surround system consists of all the speakers listed above, if you don't have a center speaker or a subwoofer, you can divide those signals between the available speakers in the speaker settings steps to obtain the best possible surround reproduction from the speakers you have available.

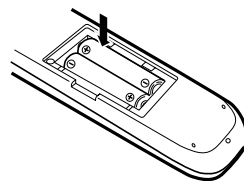
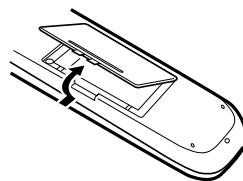


Preparing the remote control

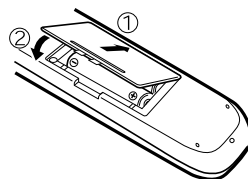
Loading the batteries

① Remove the cover.

② Insert the batteries.



③ Close the cover.

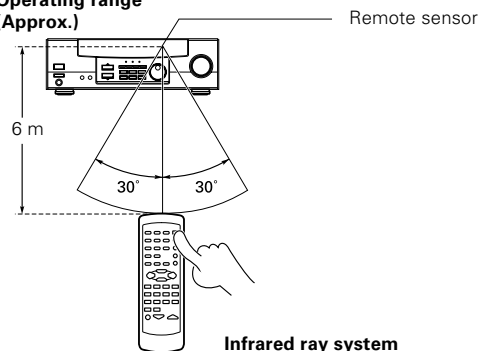


- Insert two AA-size (R6) batteries as indicated by the polarity markings.

Operation

When the **STANDBY** indicator is lit, the power turns ON when you press the **POWER** key on the remote control. When the power comes ON, press the key you want to operate.

Operating range (Approx.)



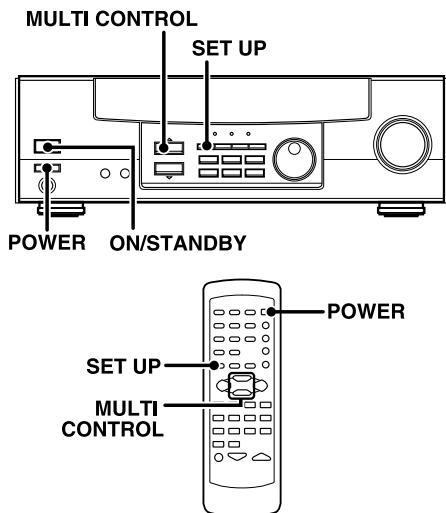
- When pressing more than one remote control key successively, press the keys securely by leaving an interval of 1 second or more between keys.

Notes

- The supplied batteries may have shorter lives than ordinary batteries due to use during operation checks.
- When the remote-controllable distance gets shorter than before, replace both batteries with new ones.
- Placing the remote sensor in direct sunlight, or in direct light from a high frequency fluorescent lamp may cause a malfunction. In such a case, change the location of the system installation to prevent malfunction.

Speaker settings

To enable you to obtain optimum enjoyment from the receiver's listening modes, make sure to complete the speaker settings (subwoofer, front, center, and surround speakers) as described below.



1 Turn on the power to this receiver by pressing POWER and ON/STANDBY key.

2 Select a speaker system.

1 Press the SET UP key to make the subwoofer setting indication (SUBW) appear.



2 Use the MULTI CONTROL to select the appropriate subwoofer setting.

- ➔ **1 SUBW YES:** A subwoofer is connected to the receiver.
- ➔ **2 SUBW NO:** No subwoofer is connected to the receiver.

- The initial setting is "SUBW YES".
- When the setting "SUBW NO" is selected, the front speakers automatically are set to "FRNT LRG" and the procedure skips to step 5.
- When subwoofer output sound is required select "FRNT NML".

3 Press the SET UP key to accept the setting.

- The front speakers setting indication (FRNT) appears.



4 Use the MULTI CONTROL to select the appropriate front speakers setting.

- ➔ **1 FRNT NML (normal):** Average size front speakers are connected to the receiver.
- ➔ **2 FRNT LRG (large):** Large front speakers are connected to the receiver.

5 Press the SET UP key to accept the setting.

- The center speaker setting indication (CNTR) appears.

6 Use the MULTI CONTROL to select the appropriate center speaker setting.

If you selected "LRG" as the front speakers setting.

- ➔ **1 CNTR LRG (large):** A large center speaker is connected to the receiver.
- ➔ **2 CNTR NML (normal):** An average size center speaker is connected to the receiver.
- ➔ **3 CNTR NO:** No center speaker is connected to the receiver.

If you selected "NML" as the front speakers setting.

- ➔ **1 CNTR YES:** A center speaker is connected to the receiver.
- ➔ **2 CNTR NO:** No center speaker is connected to the receiver.

7 Press the SET UP key to accept the setting.

- The surround speaker setting indication (SURR) appears.

8 Use the MULTI CONTROL to select the appropriate surround speaker setting.

If you selected "LRG" as the center speaker setting.

- ➔ **1 SURR LRG (large):** Large surround speakers are connected to the receiver.
- ➔ **2 SURR NML (normal):** Average size surround speakers are connected to the receiver.
- ➔ **3 SURR NO:** No surround speakers are connected to the receiver.

If you selected other than "LRG" as the center speaker setting.

- ➔ **1 SURR YES:** Surround speakers are connected to the receiver.
- ➔ **2 SURR NO:** No surround speakers are connected to the receiver.

9 Press the SET UP key to accept the setting.

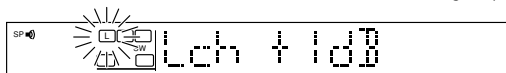
- The receiver enters the speaker volume level adjustment mode.
- In steps 2 and 4, indications appear only for the selected channels of the speakers that require adjusting.

3 Adjust the volume levels for the speakers.

Sit in your normal listening position and listen to the test tone. Adjust the volume levels for the speakers until all speakers seem to be equally loud.

1 Use the MULTI CONTROL to adjust the volume when the test tone is being output from the speaker channel to be adjusted.

The channel indication blinks while the test tone is being output.



The test tone issues from the speakers for 2 seconds at a time in the following sequence:

Lch → Cch → Rch → RS → LS → SW → Lch

- If you change the volume level settings for the speakers while listening to music, the settings referred to on this page are also changed. → 27

- If the speaker setting selects are changed, the speaker level settings are reset.

2 Press the SET UP key.

- The receiver enters the mode for inputting the distance to the speakers.

4 Input the distance to the speakers.

- 1 Measure the distance from the listening position to each of the speakers.

Jot down the distance to each of the speakers.

Distance to front speakers: _____ feet (meters)
 Distance to center speaker: _____ feet (meters)
 Distance to surround speakers: _____ feet (meters)

- 2 Use the MULTI CONTROL to select the distance to the front speakers.

The speaker indicator to be adjusted blinks.

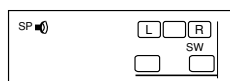


- The allowable setting range is 1 to 30 feet (0.3 to 9.0 m), adjustable in 1 foot (0.3 m) increments.

- 3 Press the SET UP key.

- 4 Repeat steps 2 and 3 to input the distance for each of the speakers.

- 5 Setup is complete when the input indication reappears.



Display when all speakers have been selected.

- The speakers you selected appear on the display. Confirm that all the speakers have been correctly selected.

Input level adjustment (analog sources only)

If the input level of an analog source signal is too high, adjust the input level.

- 1 Use the INPUT SELECTOR knob to select the source who's input level you want to adjust.

- You can store a separate input level for each input source. If the MONITOR function is on, you can store an input level for when MONITOR is on independently of the input levels for the input sources.

- 2 Press the SOUND key several times until the "INPUT" indication appears.

- 3 Use the MULTI CONTROL to adjust the input level.



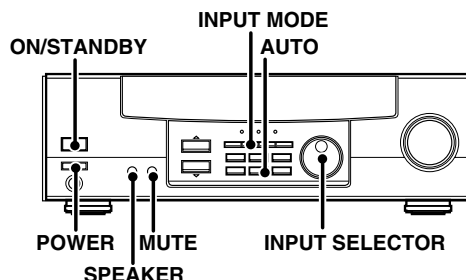
- The adjustment mode is displayed for approximately eight seconds.
- The input level may be adjusted to any one of three settings: 0, -3, and -6. (The initial setting is 0.)

- 4 Press the SOUND key to return to the input indication.

Normal playback

Preparing for playback

Some preparatory steps are needed before starting playback.



Selecting the input mode

If you have selected a component connected to the CD/DVD, DVD/6ch or VIDEO2/MONITOR jacks, make sure that the input mode setting is correct for the type of audio signal to be used. - 7

Selecting MD/TAPE

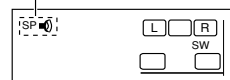
Select the source name corresponding to the component connected to the MD/TAPE jacks. The initial factory setting is "TAPE". To change the source name associated with the MD/TAPE jacks to "MD," follow the steps below:

- 1 Use the INPUT SELECTOR knob to select "TAPE".

- 2 Hold down the AUTO key for more than 2 seconds.

- The source indication changes to "MD".
- To return to the original indication, repeat the above procedure.
- You also will need to change the name input to the remote control to "MD".

The speaker indicator lights.



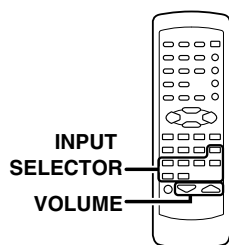
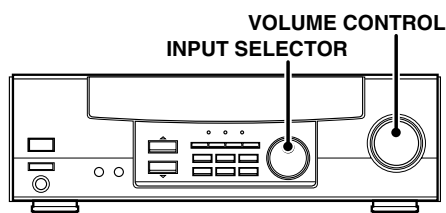
Press the SPEAKER key to switch the speakers on and off.

Turning on the receiver

- 1 Turn on the power to the related components.

- 2 Turn on the power to this receiver by pressing POWER and ON/STANDBY keys.

Listening to a source component



- 1 Use the **INPUT SELECTOR** to select the source you want to listen to.

The input sources change as shown below:

Selecting a source using the **INPUT SELECTOR** knob

- 1 "PHONO"
- 2 "TUNER"
- 3 "CD/DVD"
- 4 "TAPE" or "MD"
- 5 "VIDEO1"
- 6 "VIDEO2"
- 7 "DVD/6ch"

- 2 Start playback from the selected source.

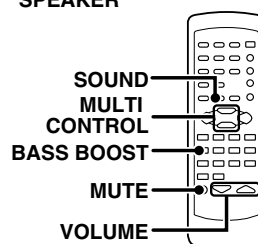
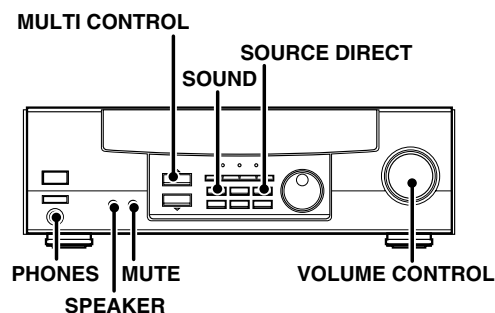
- 3 Use the **VOLUME CONTROL** knob (**VOLUME** keys) to adjust the volume.

Selecting VIDEO 2/MONITOR

Depending on the component connected to the **VIDEO 2/MONITOR** jacks, select either the "**VIDEO 2**" setting or the "**MONITOR**" setting, as appropriate.



Adjusting the sound



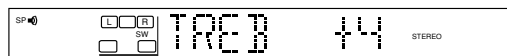
Adjusting the tone

You can adjust the sound quality when the receiver is in the PCM stereo and analog stereo mode.

- 1 Press the **SOUND** key to select the tone mode to be adjusted.

BASS: Select this to adjust the low frequency range.
(Press the **SOUND** key once.)

TREB: Select this to adjust the high frequency range.
(Press the **SOUND** key twice.)



- 2 Use the **MULTI CONTROL** to adjust the sound quality.

- The bass and treble levels are adjustable from -10 to +10 in 2 step increments.
- The adjustment item is displayed for approximately 8 seconds.

Once-touch low frequency emphasis (bass boost)

You can adjust the sound quality when the receiver is in the PCM stereo and analog stereo mode.

Press the **BASS BOOST** key.

- Press the key once to select the maximum (+10) low frequency emphasis setting.
- This key does not function when the receiver is in the sound quality or ambience effects adjustment mode.

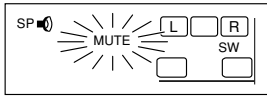
Switching back to the previous setting

Press the **BASS BOOST** key again.

Muting the sound

The **MUTE** key lets you mute the sound of the speakers.

Press the **MUTE** key.



Blinks

To cancel

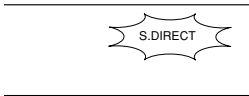
Press the **MUTE** key again so that the "MUTE" indicator goes off.

- Muting can also be canceled by adjusting the volume.

SOURCE DIRECT playback (analog sources only)

Use this function to pass the source material direct to the amplifier, bypassing any audio processing.

Press the **SOURCE DIRECT** key.



- When you press the **LISTEN MODE**, **SOUND**, or **SET UP** keys, or switch to another input source, SOURCE DIRECT playback will be canceled.

To cancel

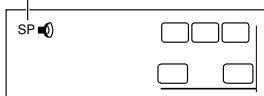
Press the **SOURCE DIRECT** key again.

- If SOURCE DIRECT playback was activated when using a surround mode, cancelling it reactivates the previous surround mode.

Listening with headphones

- 1 Press the **SPEAKER** key so that the speaker indicator goes off.

Make sure the SP indicators are turned off.



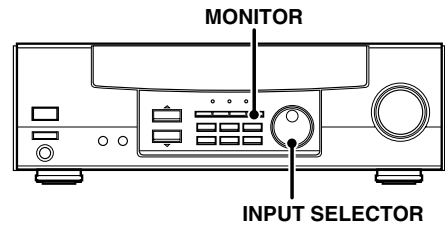
- If you turn off all of the speakers when in the surround mode, the mode is canceled as well, resulting in stereo playback.
- The speakers do not switch off during the 6ch INPUT mode. Select the other input mode.



- 2 Connect headphones to the **PHONES** jack.



- 3 Use the **VOLUME CONTROL (VOLUME)** to adjust the volume.

Recording**Recording audio (analog sources)****Recording a music source**

When recording a music source, switch the **VIDEO2/MONITOR** setting to "MONITOR".



- 1 Use the **INPUT SELECTOR** knob to select the source (other than "MD/TAPE") you want to record.
- 2 Set the cassette deck to record.
- 3 Start playback, then start recording.

Recording tapes or MD (with MONITOR function)

When recording a music source, switch the **VIDEO2/MONITOR** setting to "MONITOR".

**MONITOR → MD/TAPE recording**

- 1 Press the **MONITOR** key.



- 2 Use the **INPUT SELECTOR** knob to select a source other than "MD/TAPE."
- 3 Start playback on the cassette deck connected to the **MONITOR** jacks and start recording on the cassette deck connected to the **MD/TAPE** jacks.


MD/TAPE → MONITOR recording

- 1 Use the **INPUT SELECTOR** knob to select "MD/TAPE."
 - 2 Start playback on the cassette deck connected to the **MD/TAPE** jacks and start recording on the cassette deck connected to the **VIDEO2/MONITOR** jacks.
- To copy tapes using a double cassette deck, refer to the instruction manual of the double cassette deck.

MONITOR function (analog sources only)

You can connect a cassette deck or graphic equalizer to the **VIDEO2/MONITOR** jacks of the receiver. If a graphic equalizer is connected, the **MONITOR** key should be left in the on position. Alternately, if a cassette deck equipped with a 3-head system is connected to the **VIDEO2/MONITOR** jacks, you will be able to monitor the just-recorded signal while making recordings on the cassette deck. By switching the **MONITOR** key on and off, you can compare the sound of the source signal and the just-recorded signal. For more information, refer to the instruction manual of the connected component.

Recording video

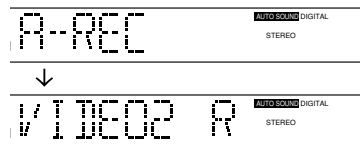
- ❶ Use the **INPUT SELECTOR** to select the video source (other than "VIDEO1") you want to record.
- ❷ Set the video deck connected to **VIDEO 1** to record.
 - Select the REC MODE to record a digital input source.
- ❸ Start playback, then start recording.
 - With certain video software, recording may not be normal due to the copy guard condition. 

Recording audio (digital sources)

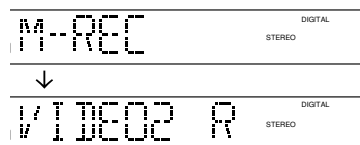
Switch on the **REC** mode to record a digital input source. Usually use the **A-REC** (Auto-Record) mode to record audio input sources.

When the digital mode changes during recording in the **A-REC** mode, the audio may be interrupted momentarily.

For A-REC mode:



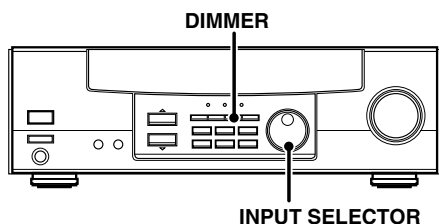
For M-REC mode:



- ❹ Play the source from the beginning and start recording.

- If the audio reproduction stops in the middle due to change in the input signals, etc., press the **DIMMER** key.

Recording music in A-REC or M-REC mode

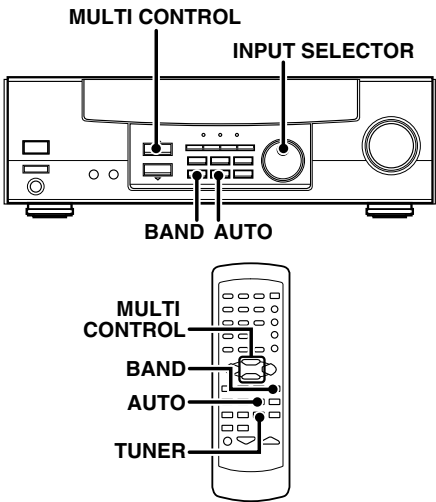


- ❶ Use the **INPUT SELECTOR** to select the source (CD, DVD or VIDEO2) you want to record.
- ❷ Set the cassette deck to record.
- ❸ Press and hold the **DIMMER** key for more than 2 seconds to select the A-REC or M-REC mode.
 - The mode changes every 2 seconds as shown below.

- ➔ ❶ **REC MODE off** : The digital input record mode is switched off.
- ➔ ❷ **A-REC MODE** : The digital input signals (Dolby Digital, or PCM) are identified automatically and converted into stereo signals that are ready for recording.
- ➔ ❸ **M-REC MODE** : The input signal type at the moment this mode is selected is held throughout this mode.

Tuning (non-RDS) radio stations

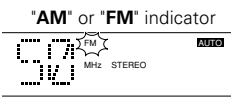
Radio stations can be classified into RDS (Radio Data System) stations and other stations. To listen to or store RDS stations in the preset memory, see the section entitled, "Using RDS".



- 1 Use the **INPUT SELECTOR** or **TUNER** key to select the tuner.
- 2 Use the **BAND** key to select the desired broadcast band.

Each press switches the band as follows:

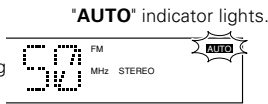
- 1 FM
- 2 AM



- 3 Use the **AUTO** key to select the desired tuning method.

Each press switches the tuning method as follows:

- 1 **AUTO** lit (auto tuning)
- 2 **AUTO** not lit (manual tuning)



• Normally, set to "AUTO" (auto tuning). If the radio waves are weak and there is a lot of interference, switch to manual tuning. (With manual tuning, stereo broadcasts will be received in monaural.)

- 4 Use the **MULTI CONTROL** to select the station.



Auto tuning : The next station is tuned automatically.
Manual tuning : Turn the knob (press the key) to select the desired station.

Using RDS (Radio Data System)

RDS is a system that transmits useful information (in the form of digital data) for FM broadcasts along with the broadcast signal. Tuners and receivers designed for RDS reception can extract the information from the broadcast signal for use with various functions, such as automatic display of the station name.

RDS functions:

PTY (Program Type Identification) Search - [24]
Automatically tunes to a station that is currently broadcasting the specified program type (genre).

PS (Program Service Name) Display
Automatically displays the station name transmitted by the RDS station.

RDS AUTO MEMORY function - [22]
Automatically selects and stores up to 40 RDS stations in the preset memory.
If fewer than 40 RDS stations have been stored in the preset memory, regular FM stations will be stored in the remaining places.

Radio Text function
Displays the radio text data transmitted by some RDS stations when you press the **RDS DISP.** key. There is "NO RT" display if no text data is transmitted.

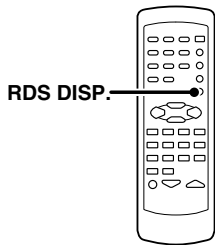
The "RDS" indicator lights up when an RDS broadcast (signal) is received.



Note
Some functions and function names may differ for certain countries and areas.

Before using a function utilizing the RDS, be sure to perform the RDS Auto Memory operation by referring to the description in "Presetting RDS stations (RDS AUTO MEMORY)". - [22]

22 Using the RDS DISP. (Display) key



Pressing the RDS DISP. key changes the contents of the display.

Each press switches the display mode as follows:

- ① PS (Program Service name) display
- ② RT (Radio Text) display
- ③ Frequency display

① PS (Program Service name) display:

The station name is displayed automatically when an RDS broadcast is received. If no PS data was sent, "NO PS" is displayed.



② RT (Radio Text) display:

Text data accompanying the RDS broadcast scrolls across the display. "NO RT" or "RT----" is displayed if the current RDS station does not provide RT data.



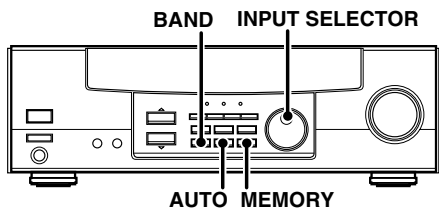
③ Frequency display:

Displays the frequency of the current station.



Presetting RDS stations (RDS AUTO MEMORY)

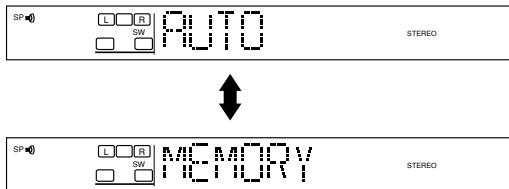
This function automatically stores up to 40 RDS stations in the preset memory. In order to use the PTY function, the RDS stations must be stored in the preset memory using the RDS AUTO MEMORY function.



1 Use the INPUT SELECTOR knob to select the tuner.

2 Use the BAND key to set the broadcast band to "FM".

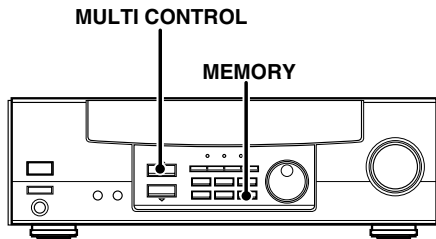
3 Press and hold the MEMORY key for more than 2 seconds.



- After a few minutes, up to 40 RDS stations are preset in order from channel "01".
- Stations already stored in the preset memory may be replaced by RDS stations. (i.e., If the RDS AUTO MEMORY function finds 15 RDS stations, the stations currently preset at numbers 01~15 are replaced by the RDS stations.)

Presetting radio stations manually

The RDS auto memory function assigns preset numbers to RDS stations starting from preset number "1". Therefore, be sure to execute the RDS auto memory function before using the following operations to manually store AM stations and other FM stations, and RDS stations. "Presetting RDS stations (RDS AUTO MEMORY)". → 22

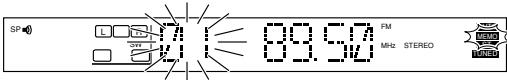


1 Tune to the station you want to store.

2 Press the **MEMORY** key while receiving the station.

Blinks for 5 seconds

Lights for 5 seconds



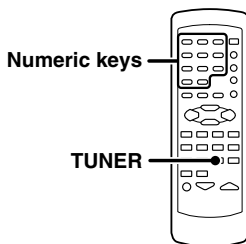
Proceed to step **3** within 5 seconds.
(If more than 5 seconds elapse, press the **MEMORY** key again).

3 Use the **MULTI CONTROL** to select one of the station presets (1 – 40).

4 Press the **MEMORY** key to accept the setting.

- Repeat steps **1**, **2**, **3**, and **4** to store as many stations as necessary.
- If you store a station at a previously used preset, the old station will be replaced by the new one.

Receiving preset stations



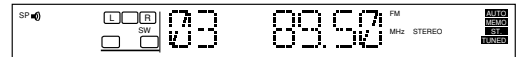
1 Press **TUNER** to select the tuner as the source.

2 Enter the number of the preset you want to receive (up to "40").

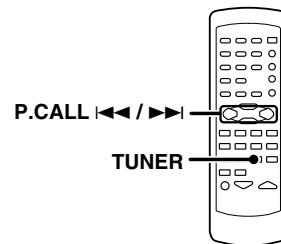
Press the numeric keys in the following order:

For "15", press **+10**, **5**
For "20", press **+10**, **+10**, **0**

- If you make a mistake entering a two digit number, press the **+10** key several times to return to the original display and start again.



Receiving preset stations in order (P.CALL)



1 Press **TUNER** to select the tuner as the source.

2 Use the **P.CALL** keys to select the desired station.

- Each time you press the key, another preset station is received in order.

Pressing the **P.CALL** (**▶▶|**) key does the following:

01→02→03→ 38→39→40→01→02→03→

Pressing the **P.CALL** (**◀◀|**) key does the following:

01←02←03← 38←39←40←01←02←03←

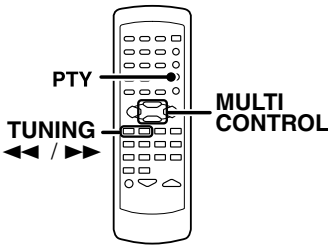
Holding down the key, lets you skip through the presets, receiving each for 0.5 seconds a piece.

24

Tuning by program type (PTY search)

This function lets you set the tuner to automatically search for stations which are currently broadcasting the type of program (genre) you want to listen to.

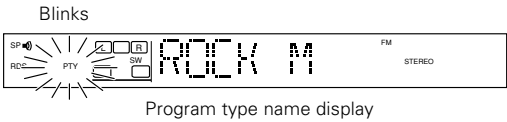
Under certain receiving conditions, it may take more than 1 minute to complete the search.



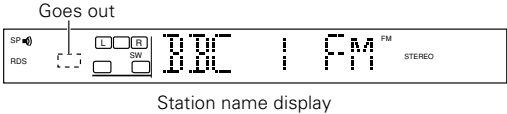
3 Press the PTY key to start searching.

EXAMPLE: Searching for a Rock Music broadcast.

Display while searching



Display when a station is received.



- No sound is heard while "PTY" is blinking.
- If the desired program type cannot be found, "NO PROG" is displayed, then after several seconds the display returns to the original display.

To select another program type

Repeat steps 1, 2 and 3.

Preparations

- Execute the RDS auto memory procedure.
- Set the broadcast band to FM.
- Tune to an RDS station.

1 Press the PTY key to activate the PTY search mode.



When an RDS broadcast is received, the program type is shown on the display. If no PTY data is available, or if the station is not an RDS station, "NONE" is displayed.

2 While the "PTY" indicator is lit, use the MULTI CONTROL or TUNING <</>> keys to select the program type of your choice.

Program type table

Program Type Name	Display	Program Type Name	Display
News	NEWS	Weather	WEATHER
Current Affairs	AFFAIRS	Finance	FINANCE
Information	INFO	Children's Programmes	CHILDREN
Sport	SPORT	Social Affairs	SOCIAL
Education	EDUCATE	Religion	RELIGION
Drama	DRAMA	Phone In	PHONE IN
Culture	CULTURE	Travel	TRAVEL
Science	SCIENCE	Leisure	LEISURE
Varied Speech	VARIED	Jazz Music	JAZZ
Pop Music	POP M	Country Music	COUNTRY
Rock Music	ROCK M	National Music	NATION M
Easy Music	EASY M	Oldies Music	OLDIES
Light Classical Music	LIGHT M	Folk Music	FOLK M
Serious Classical Music	CLASSICS	Documentary	DOCUMENT
Other Music	OTHER M		

"NO PROG" is displayed if this operation is attempted before performing the RDS Auto Memory operation.

This receiver is equipped with listening modes that allow you to enjoy an enhanced sonic ambience with a variety of video sources.

In order to obtain the optimum effect from the surround modes, make sure to input the proper speaker settings beforehand.

→ 16

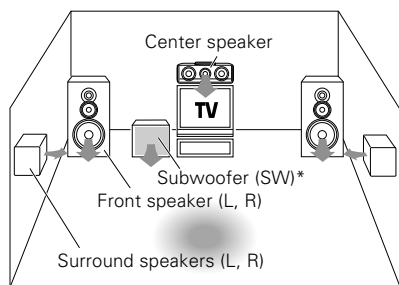
Surround modes

Dolby Digital

The Dolby Digital surround format lets you enjoy up to 5.1 channels of digital surround sound from Dolby Digital program sources (such as Laserdisc or DVD software marked **DD [DOLBY DIGITAL]**). Compared with previous Dolby surround, Dolby Digital provides even better sound quality, greater spatial accuracy, and improved dynamic range.

Note

Although a full set of speakers (front left, right, and center, surround left and right, and a subwoofer) is required for true 5.1 channel Dolby Digital surround sound, this receiver lets you enjoy Dolby Digital (and Dolby Surround) program sources, even if you connect only the front speakers.



* LFE = Low Frequency Effects. This channel delivers separate non-directional bass signals to the subwoofer for more dynamic deep bass sound effects.

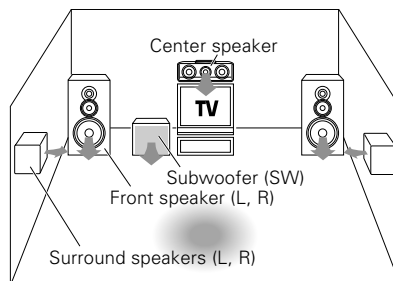
Although only Dolby Digital soundtracks incorporate a separate low frequency channel, connecting a subwoofer will also improve deep bass performance in the other surround modes.

The indication "LFE" appears in the display when a signal is being input for this channel.

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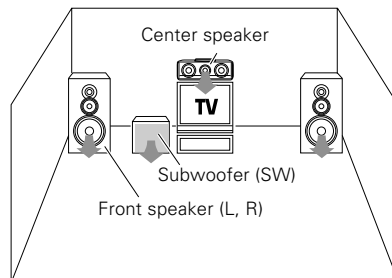
Dolby Pro Logic

Dolby Pro Logic is a specially encoded 2 channel surround format designed to provide theater-like surround sound from Dolby Surround encoded sources (such as video and Laserdisc software marked **DD [DOLBY SURROUND]**). This receiver is equipped with a Dolby Pro Logic surround decoder to let you enjoy the wide variety of currently available Dolby Surround home video software. Surround signal is monaural.



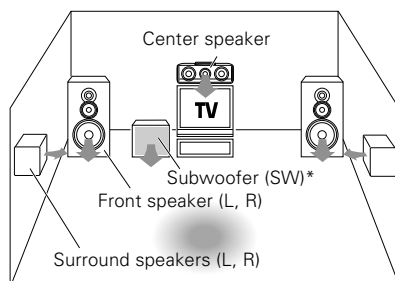
Dolby 3 Stereo

Dolby 3 Stereo is available for systems that do not have surround speakers. When in the Dolby 3 Stereo mode, the surround information is redirected to the front left and right speakers. This mode is designed for use with Dolby Surround program sources, but can also improve sound field unity for programs that are not Dolby Surround encoded. Dialog positioning and sound image definition, however, may not be as accurate when used with programs that are not Dolby Surround encoded.





DVD 6-channel mode

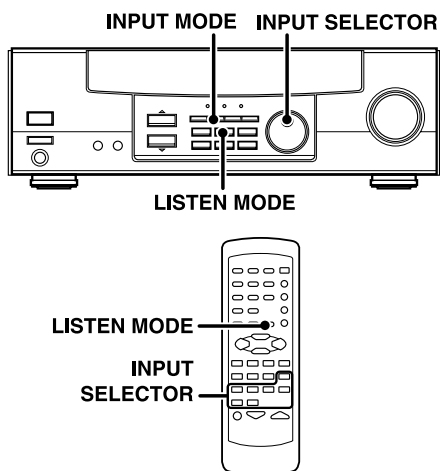
Using a DVD player or the like equipped with six (5.1) output channels and the receiver, you can enjoy multi-channel encoded DVD source material in all its splendor. Since the source signals are digital and each channel is input independently, the resulting sound quality, sense of spaciousness, and dynamic range are superb.





* LFE = Low Frequency Effects. This channel delivers separate non-directional bass signals to the subwoofer for more dynamic deep bass sound effects.

Surround Play

DOLBY DIGITAL can be used when playing DVD or LD software bearing the  mark and DOLBY DIGITAL format digital broadcasts (etc.). DOLBY PRO LOGIC and DOLBY 3 STEREO can be used when playing video, DVD, or LD software bearing the  mark.



Preparations

- Turn ON related components.
- Complete "Preparing for surround sound" (speaker settings). 
- Use the **INPUT SELECTOR** to select the component you wish to playback with surround sound.
- Use the **INPUT MODE** key to select the input mode (analog or digital) for the source you wish to play back. 

1 Start playing the video software.

2 Press the LISTEN MODE key to select the listening mode.

The listening mode settings are stored separately for each input. If the input mode is set to digital auto ("AUTO SOUND" lights), the receiver selects the optimal listening mode automatically based on the type of input signal and the speaker settings.

Each press of the LISTEN MODE key switches the setting as listed below.

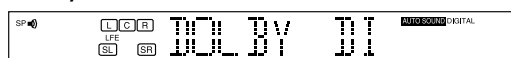
The listening mode settings are different depending on the type of input signal.

When the DOLBY DIGITAL signal is input:

(The DOLBY DIGITAL, PRO LOGIC, or 3 STEREO indicator lights up.)

- 1 **DOLBY DIGITAL:** DOLBY DIGITAL surround
- 2 **PRO LOGIC:** PRO LOGIC surround
- 3 **3 STEREO:** 3-STEREO surround
- 4 **STEREO:** Normal stereo playback

When you select DOLBY DIGITAL







When the analog signal or the digital signal except for the DOLBY DIGITAL signal is input:

- 1 **PRO LOGIC:** PRO LOGIC surround (The PRO LOGIC indicator lights up.)
- 2 **3 STEREO:** 3-STEREO surround (The 3 STEREO indicator lights up.)
- 3 **STEREO:** Normal stereo playback

- If a Dolby Digital signal having more channels than the maximum number of playback channels available using the receiver's current setting is input, the **DOWN MIX** indicator on the front panel lights up and downmixing is performed to match the number of available channels.

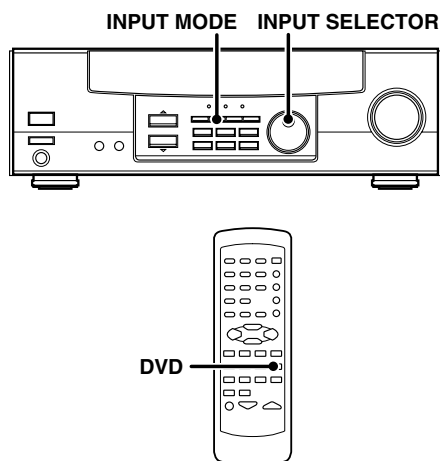
3 Adjust the volume.

Notes

- Depending on the type of the signal or speaker setting, some listening modes cannot be selected.
- When playback is started, the sound may be cut or interrupted before the input source is confirmed as Dolby Digital.
- To enjoy Dolby Digital surround (as well as all the other listening modes) from a single component, be sure to use a Dolby Digital compatible source component. Connect the Dolby Digital compatible source component's Dolby Digital format digital audio signal to one of the **DIGITAL INPUT** jacks on the back of the receiver. Connect the normal audio signal correctly to the respective component's **AUDIO** jacks.    

DVD 6-channel playback

Using a DVD player or the like equipped with six (5.1) output channels and the receiver, you can enjoy surround sound playback. When you try to play a disc other than Dolby Digital such as CD, no sound is produced or, noise may be heard. To avoid this situation, make sure that you connect the component to the receiver's DVD/6ch INPUT jacks through a surround processor which can decode the surround signal you want to listen to. Connecting a DVD player which can decode the surround signal itself is also acceptable.



Preparations

- Connect your DVD player to the DVD/6ch jacks of the receiver.
- Turn on all other components that will be used.
- Complete "Preparing for surround sound".

→ 16

1 Select "DVD/6ch" as the input source.

- Use the INPUT SELECTOR knob to select DVD/6ch mode.

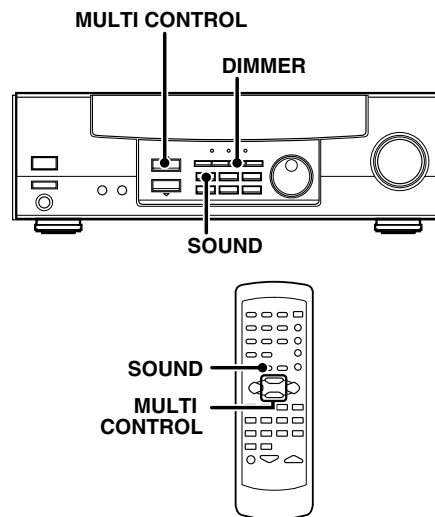
2 Select "6ch INPT" by pressing the INPUT MODE key.

3 Start playback of the DVD software.

4 Adjust the volume.

- It is not possible individually to adjust the volume level or sound quality (SET UP, SOUND) of the separate channels when the receiver is in the DVD/6ch mode. Adjust the volume with the controls of the DVD player.
- For the powered subwoofer, you can adjust the volume of the subwoofer using the subwoofer's own volume control.

Convenient functions



Adjusting the sound

You can make further adjustments to the sound while listening to playback in the surround mode.

- 1 Press the SOUND key to select the item you want to adjust.

Each press switches the selection as listed below.

Note that some items are not displayed in certain modes.

- 1 BASS (low frequency range sound quality adjustment) → 18
- 2 TREB (high frequency range sound quality adjustment) → 18
- 3 Cch (center speaker level adjustment)
- 4 RS (right surround speaker level adjustment)
- 5 LS (left surround speaker level adjustment)
- 6 SW (subwoofer level adjustment)
- 7 INPUT (input level adjustment) → 17
- 8 NIGHT (midnight mode on/off)

- 2 Use the MULTI CONTROL to adjust the setting as desired.

- The adjustment item is displayed for approximately 8 seconds.

Midnight mode (Dolby Digital mode only)

When watching movies at night, you might not be able to raise the volume as loud as normal. Midnight mode compresses the dynamic range of previously specified parts of the Dolby Digital sound track (like scenes with sudden increases in volume) to minimize the difference in volume between the specified and non-specified parts. This makes it easy to hear all of the sound track, even when listening at low volumes.

- 1 Press the SOUND key several times until "NIGHT" is displayed.

- This can be selected only if CD/DVD, DVD/6ch or VIDEO2 is selected as the source and the listen mode is set to "DOLBY DIGITAL."

- ② Use the MULTI CONTROL to select the ON or OFF setting.

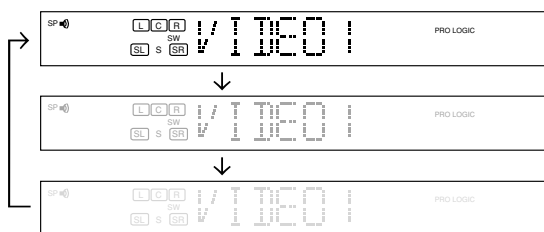


- The adjustment item is displayed for approximately 8 seconds.
- Some Dolby Digital software may not be compatible with the Midnight mode.

Display dimmer adjustment

The dimmer function lets you select the brightness of the receiver's display. You might find this useful if you darken your room to watch movies or listen to music.

Each time you press the DIMMER key, the display brightness changes among the three available settings. Select the brightness level you find most pleasing.



96kHz LPCM playback

The receiver is compatible with the 96kHz LPCM playback. To play a 96kHz DVD, set the listen mode to "STEREO."

- When "96kHz" appears in the display, press the LISTEN MODE key (the listen mode changes to the STEREO mode).

DVD player operations

The remote control of this unit can control two groups of KENWOOD DVD players directly without using the remote control supplied with the DVD player.

Group-1: DV-4900, DV-4070B, DV-2070, DV-203, DVF-9010, DVF-K7010, DVF-5010, DVF-R9030, DVF-R7030, DVF-3530 and DV-402

Group-2: DV-4050, DV-303, DVF-R6030, DVF-K5020, DVF-5020, DVF-3020 and DVF-3030

Depending on your KENWOOD DVD model, you need to set up your receiver remote control as follows:

To set for Group-1 DVD players:

Press the numeric "1" key while pressing the "POWER" key (not the DVD Power key) on your remote control.

To set for Group-2 DVD players:

Press the numeric "2" key while pressing the "POWER" key (not the DVD Power key) on your remote control.

- If your DVD player is not listed in the list above, perform the set up for either Group-1 or Group-2. When the set up is successful, then your DVD player falls into that particular group.

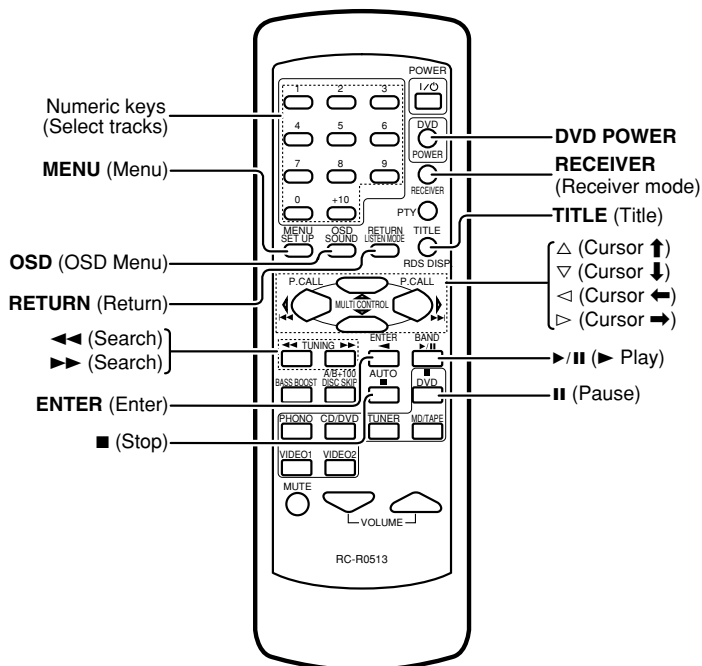
How to operate the DVD player with the remote control

- Pressing the DVD Power key for more than 2 seconds turns the DVD player on or off.
- To carry out the functions of the DVD player, first press the DVD Power key, then press each key for each operation as explained in the DVD operation pages in the operating instructions. In this case, the DVD operation mode is retained for 15 seconds after pressing any of those DVD operation buttons.

(To turn the receiver operation mode within 15 seconds, press the RECEIVER key.)

DVD player operation keys

You can perform these basic operations using the keys described below when connected to KENWOOD DVD player.



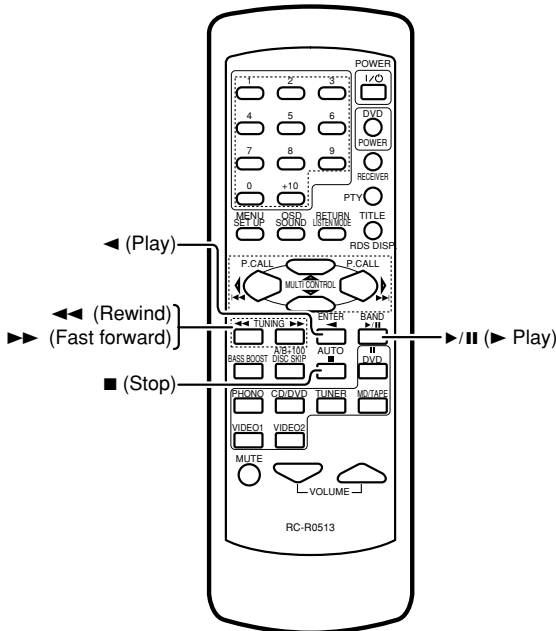
CASSETTE deck, CD player & MD recorder operations

Refer to the following for the type of remote control operations available for each component. In order to perform these operations, the components must be connected to the system control jack. → 13

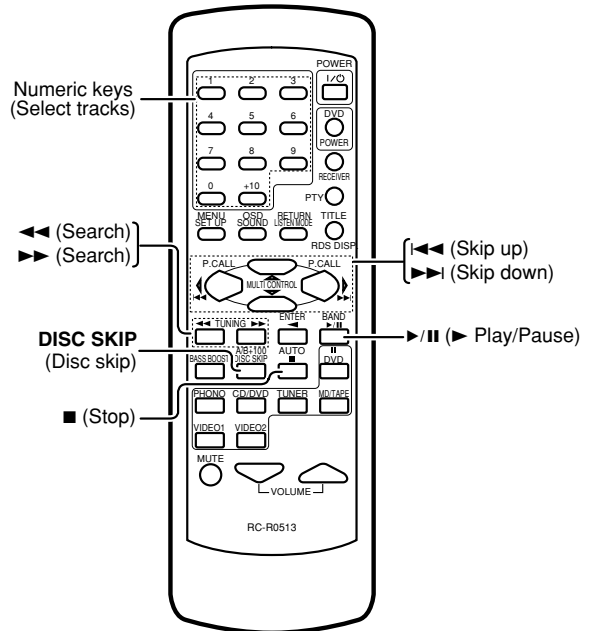
- ❶ Select the input source
- ❷ Press the keys corresponding to the operations you desire. Refer to the following sections for details.

- When pressing keys in succession, press each key firmly and be sure to wait at least 1 second before pressing the next key.
- Numeric keys function the same as the numeric keys on the original remote.

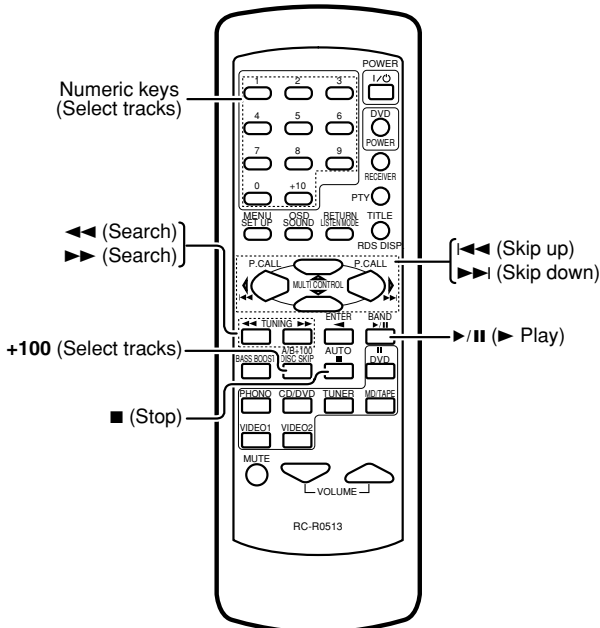
Cassette deck operations



CD player operations



MD recorder operations



Notes

- Certain codes may only operate some of the function available on a given model.
- The charts above show the typical functions available for each component. Some manufacturers use different key combinations to perform similar functions. For that reason, we have programmed extra functions on some of the unused number keys to help you control your equipment.

Resetting the Microcomputer

The microcomputer may malfunction (unit cannot be operated, or shows an erroneous display) if the power cord is unplugged while the power is ON, or due to some other external factor. If this happens, execute the following procedure to reset the microcomputer and return the unit to its normal operating condition.

With the power cord plugged in, turn the POWER key OFF. Then, while holding down the ON/STANDBY key, press POWER.

- Please note that resetting the microcomputer will clear the contents of the memory and returns the unit to the state it was in when it left the factory.

Amplifier

Symptom	Cause	Remedy
No sound from the speakers.	<ul style="list-style-type: none"> • The speaker cords are disconnected. • VOLUME is set to the minimum position. • MUTE is ON. • The SPEAKERS switches are set to OFF. 	<ul style="list-style-type: none"> • Connect them properly referring to "Connecting the speakers" → 14 • Adjust the volume to a proper level. • Turn OFF the MUTE. → 19 • Set the SPEAKERS switch(es) to ON. → 17
The standby indicator blinks and sound is not output.	<ul style="list-style-type: none"> • Speaker cords are short-circuited. 	<ul style="list-style-type: none"> • Turn the power off, eliminate the short-circuiting, then turn on the power again.
Sound is not output from one of the speakers.	<ul style="list-style-type: none"> • The speaker cord is disconnected. 	<ul style="list-style-type: none"> • Connect it properly referring to "Connecting the speakers". → 14
Sound is not output from the surround speakers and / or the center speaker, or their sound is very small.	<ul style="list-style-type: none"> • The surround speaker cords and/or the center speaker cord is disconnected. • A surround mode has not been engaged. • The surround and/or center volume controls are set to the minimum level. 	<ul style="list-style-type: none"> • Connect it properly referring to "Connecting the speakers". → 14 • Select a surround mode. • Adjust the speaker levels using the test tone. → 16
A humming noise is generated when the PHONO input selector is selected.	<ul style="list-style-type: none"> • The audio cord from the turntable is not connected to the PHONO jacks. • The turntable is not grounded. 	<ul style="list-style-type: none"> • Insert the audio cord plugs securely into the PHONO jacks. • Connect the grounding wire to the GND terminal on the rear panel.
When playing a Dolby Digital source signal using a DVD player, the sound is cut off soon after it starts.	<ul style="list-style-type: none"> • There are many possible causes for this problem, depending on the type of DVD player used. 	<ul style="list-style-type: none"> • Set the input mode to digital manual before starting playback of the Dolby Digital source. → 7
No sound is produced during playback from a DVD player.	<ul style="list-style-type: none"> • The input mode is set to digital manual. 	<ul style="list-style-type: none"> • Press the INPUT MODE key to select to digital auto mode. → 7
A video source cannot be recorded normally.	<ul style="list-style-type: none"> • The software is copy-guarded. 	<ul style="list-style-type: none"> • Copy-guarded video software cannot be recorded.

Tuner

Symptom	Cause	Remedy
Radio stations cannot be received.	<ul style="list-style-type: none"> • No antenna is connected. • The broadcast band is not set properly. • The frequency of the desired station is not tuned. 	<ul style="list-style-type: none"> • Connect an antenna. → 12 • Set the broadcast band properly. • Tune the frequency of the desired station. → 21
Interference.	<ul style="list-style-type: none"> • Noise due to ignition noise from an automobile. • Noise due to interference from an electric appliance. • Noise due to a nearby TV set. 	<ul style="list-style-type: none"> • Install the outdoor antenna away from the road. • Turn off the power to the appliance. • Install the receiver farther away from the TV.
A station which was preset cannot be received by pressing the corresponding numeric key.	<ul style="list-style-type: none"> • The preset station belongs to a frequency that cannot be received. • The preset memory was cleared because the power cord had been unplugged for a long period of time. 	<ul style="list-style-type: none"> • Preset a station with a receivable frequency. • Preset the station again.

AUDIO section

Rated power output during STEREO operation	
DIN/IEC (DIN 1 kHz, 0.7% T.H.D. at 4Ω)	80 W + 80 W
Effective power output during SURROUND operation	
FRONT (1kHz, 0.7% T.H.D. at 4Ω, one channel driven)	80 W + 80 W
CENTER (1kHz, 0.7% T.H.D. at 4Ω, one channel driven)	80 W
SURROUND (1kHz, 0.7% T.H.D. at 4Ω, one channel driven)	80 W + 80 W
Total harmonic distortion	
.....	0.05% (1 kHz, 40W, 4Ω)
Frequency response (IHF '66)	
CD	40 Hz ~ 60 kHz, +0 dB, -3.0 dB
Signal to noise ratio (IHF'66)	
PHONO (MM)	74 dB
CD	90 dB
Input sensitivity / impedance	
PHONO (MM)	2.5 mV / 27 kΩ
CD	200 mV / 47 kΩ
MONITOR IN (VIDEO2/MONITOR)	200 mV / 47 kΩ
DVD/6ch INPUT	200 mV / 47 kΩ
Output level / impedance	
TAPE REC	200 mV / 1 kΩ
MONITOR OUT (VIDEO2/MONITOR)	200 mV / 1 kΩ
PRE OUT (SUBWOOFER)	2 V / 2.2 kΩ
Tone control	
BASS	±10 dB (at 100 Hz)
TREBLE	±10 dB (at 10 kHz)

DIGITAL AUDIO section

Sampling frequency	32 kHz, 44.1 kHz, 48 kHz, 96kHz
Input level / impedance / wave length	
Optical	(-15 dBm ~ -21 dBm), 660 nm ±30nm
Coaxial	0.5 Vp-p / 75 Ω

VIDEO section

VIDEO inputs / outputs	
VIDEO (composite)	1 Vp-p / 75 Ω

FM tuner section

Tuning frequency range	87.5 MHz ~ 108 MHz
Usable sensitivity (DIN at 75 Ω)	
MONO	1.3 μV/13.2 dBf (40 kHz dev. S/N 26 dB)
STEREO	45 μV/42.1 dBf (46 kHz dev. S/N 46 dB)
Total harmonic distortion (1 kHz)	
MONO	0.2% (71.2 dBf input)
STEREO	0.8% (71.2 dBf input)
Signal to noise ratio (DIN weighted)	
MONO	65 dB (40 kHz dev. 71.2 dBf input)
STEREO	60 dB (46 kHz dev. 71.2 dBf input)
Stereo separation (DIN 1 kHz)	36 dB
Selectivity (DIN±300 kHz)	64 dB
Frequency response	(30 Hz ~ 15kHz), +0.5 dB, -3.0 dB

AM tuner section

Tuning frequency range	531 kHz ~ 1,602 kHz
Usable sensitivity (30% mod. S/N 20dB)	16 μV / (600 μV/m)
Signal to noise ratio (30% mod. 1 mV input)	50 dB

GENERAL

Power consumption	220 W
AC outlet	
SWITCHED	(total 90 W max.)
Dimensions	
W : 440 mm	
H : 143 mm	
D : 400 mm	
Weight	8.9 kg

Notes

1. KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
2. The full performance may not be exhibited in an extremely cold location (under a water-freezing temperature).

KENWOOD

For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model _____ Serial Number _____